QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL
(Qual. reliab. eng. int.)

CONTENTS

VOLUME 15, ISSUE Nos 1–6

Issue No. 1, January–February

Editorial: F. Jensen and H. A. Malec 1

Optimal Process Parameter Determination for Computer-aided Manufacturing: A. Jeang 3

Optimal New Product Design Using Quality Function Deployment with Empirical Value Functions: D. Dawson and R. G. Askin 17

An Environment for Measuring and Improving the Quality of Object-oriented Software: C. Ebert and I. Morschel 33

Improving the Lifetime of an Automatic Welding System: Y.-C. Jeng 47

SHORT COMMUNICATION

An Alternative Rule for Placement of Empirical Points on Weibull Probability Paper: A. Drapella and S. Kosznik 57

INTERNATIONAL CALENDAR OF FORTHCOMING EVENTS 60

COURSES IN QUALITY AND RELIABILITY 63

QUALITY AND RELIABILITY WEB SITE SURVEY 65

Issue No. 2, March–April

Editorial – 13th Advances in Reliability Technology Symposium: J. D. Andrews 67

ARTS PAPERS

Reliability Prediction of Helicopter Transmission Systems Using Stress-Strength *Interference with Underlying Damage Accumulation: C. S. Place, J. E. Strutt, K. Allsopp,* P. E. Irving and C. Trille 69

Reliability Worth Assessments of Electrical Distribution Networks: R. N. Allan and K. K. Kariuki 79

Measuring the Effectiveness of Reliability Growth Testing: J. Quigley and L. Walls 87

Efficient Basic Event Ordering Schemes for Fault Tree Analysis: L. M. Bartlett and J. D. Andrews 95

Optimal Design of Systems with Standby Dependencies: L. M. Ridley and J. D. Andrews 103

Maintenance Free Operating Periods – The Designer's Challenge: M. N. Relf 111

Criticality Analysis Revisited: T. R. Moss and J. Woodhouse 117

REGULAR PAPERS

Practical Application of Supersaturated Arrays: G. Bandurek 123

Improving Automatic-Controlled Process Quality using Adaptive Principal Component Monitoring: F. Tsung 135

Reliability Analysis of Aeroplane Brakes: A. Z. Al-Garni, A. Z. Sahin, A. S. Al-Ghamdi and S. A. Al-Kaabi 143

NEWS DIGEST 151

INTERNATIONAL CALENDAR OF FORTHCOMING EVENTS 155

Issue No. 3, May–June

Editorial: F. Jensen 159

Obituary—Denis Carter: H. A. Malec 159

Improving the Performance of the Multivariate Exponentially Weighted Moving Average Control Chart: G. C. Runger, J. B. Keats, D. C. Montgomery and R. D. Scranton 161

Reliability Growth—A New Graphical Model: J. Donovan and E. Murphy 167

Effective Application of $Q(R)$ Charts in Low-Volume Manufacturing: K. C. B. Roes, R. J. M. M. Does and B. S. Jonkers 175

Finding Active Factors from Unreplicated Fractional Factorials Utilizing the Total Time on Test (TTT) Technique: P. S. Wiklund and B. Bergman 191

Tool Replacement Policy for Probabilistic Tool Life and Random Wear Process: A. Jeang 205

Process Capability Plots—a Quality Improvement Tool: M. Deleryd and K. Vännman 213

Optimal Initial Production Control Period Based on a Quality Growth Model: Y. Tatsumi, M. Kimura and S. Yamada 229

SHORT COMMUNICATIONS

An Improved Failure-Free Time Estimation Method: A Drapella 235

Reliability Optimization of Complex Systems using Modified Random-To-Pattern Search (MRPS) Algorithm: B. N. Murty and P. J. Reddy 239

NEWS DIGEST 245

INTERNATIONAL CALENDAR OF FORTHCOMING EVENTS 248

Issue No. 4, July–August

Editorial: Customer Demands for Quality and Reliability for Critical Applications: E. B. Hakim 251

CUSTOMER DEMANDS PAPERS

Reliability Assessment of Aerospace Electronic Equipment: L. Condra, C. Bosco, R. Deppe, L. Gullo, J. Treacy and C. Wilkinson 253

A Risk-Informed Methodology for Parts Selection and Management: M. Jackson, P. Sandborn, M. Pecht, C. Hemens-Davis and P. Audette 261

A Dependability Strategy for Next-Generation Networks: D. Kiang 273

Automotive Demands for Quality and Reliability in Microelectronics: G. E. Servais 279

Do We Need a PEM Reliability Model?: E. B. Hakim 283

REGULAR PAPERS

Developing Identification Techniques with the Integrated Use of SPC/EPC and Neural Networks: Y. E. Shao and C.-C. Chiu 287

Charting Techniques for Monitoring a Random Shock Process: T. C. Chang and F. F. Gan ... 295

The Analysis of Covariance: A Useful Technique for Analyzing Quality Improvement Experiments: K. O. Silknitter, J. W. Wisnowski and D. C. Montgomery 303

Using Dual *np*-Charts to Detect Changes: N. C. Schwertman and T. P. Ryan 317

Making Decisions in Assessing Process Capability Index C_{pk}: W. L. Pearn and K. S. Chen 321

NEWS DIGEST 327

INTERNATIONAL CALENDAR OF FORTHCOMING EVENTS 329

COURSES IN QUALITY AND RELIABILITY 332

QUALITY AND RELIABILITY WEB SITE SURVEY 334

Issue No. 5, September–October

Obituary—Henry A. Malec: Finn Jensen 337

Computing Process Capability Indices for Non-normal data: A Review and Comparative Study: L. C. Tang and S. E. Than 339

Application of $\bar{X}$ Control Chart with Modified Limits in Process Control: T. C. Chang and F. F. Gan 355

Sampling Plans for Vehicle Component Reliability Verification: H. Ke 363

A Bayesian Procedure for Process Capability Assessment: J.-J. H. Shiau, C.-T. Chiang and H.-N. Hung 369

Comparisons on the Analysis of Poisson Data: P. C. Wang 379

Hazard Analysis Critical Control Point (HACCP): Implementation in Greek Industry: G. Marnellos and G. Tsiotras 385

A Weighted Variance Capability Index for General Non-Normal Processes: H.-H. Wu, J. J. Swain, P. A. Farrington and S. L. Messimer 397

INTERNATIONAL CALENDAR OF FORTHCOMING EVENTS 403

COURSES IN QUALITY AND RELIABILITY 407

Issue No. 6, November–December

Editorial: Product Quality and Reliability as a Function of Quality of Business Process: A. C. Brombacher 409

Organizing for Creativity, Quality and Speed in Product Creation Processes: F. M. van Eijnatten and L. W. L. Simonse 411

Quality and Reliability in Product Creation – Extending the Traditional Approach: S. Minderhoud 417

Reliability in a Time-Driven Product Development Process: Lu Yuan, H. T. Loh, Y. Ibrahim, P. C. Sander and A. C. Brombacher 427

The Role of the Service Centre in Improvement Processes: V. T. Petkova, P. C. Sander and A. C. Brombacher 431

MIR: The Use of Reliability Information Flows as a Maturity Index for Quality Management: P. C. Sander and A. C. Brombacher 439

Product Reliability and the Reliability of Its Emanating Operational Processes: P. J. M. Sonnemans and W. H. J. M. Geudens 449

Part Manufacturer Assessment Process: M. Jackson, A. Mathur, M. Pecht and R. Kendall ... 457

The Process Matrix, a Simple Tool to Analyse and Describe Production Processes: W. A. J. Schippers 469

Product-Focused Software Process Improvement (P–SPI): Concepts and their Application: R. van Solingen, R. J. Kusters, J. J. M. Trienekens and A. van Uijtregt 475

Identifying Embedded Software Quality: Two Approaches: R. J. Kusters, R. van Solingen and J. J. M Trienekens 485

Safety Lifecycle Management. A Flowchart Presentation of the IEC 61508 Overall Safety Lifecycle Model: K. A. L. van Heel, B. Knegtering and A. C. Brombacher 493

Call for Papers 501

INTERNATIONAL CALENDAR OF FORTHCOMING EVENTS 502

PUBLISHER'S ANNOUNCEMENT 505

AUTHOR INDEX 506

KEY WORD INDEX 507

VOLUME CONTENTS v